



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/515,980	07/06/2005	Hideaki Watanabe	101136-00120	2588
4372 7590 01/17/2007 ARENT FOX PLLC 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			EXAMINER PILKINGTON, JAMES	
			ART UNIT	PAPER NUMBER
			3682	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/515,980

Applicant(s)

WATANABE ET AL.

Examiner

James Pilkington

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) 9,11,12,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,3,8,10 and 13 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed November 29, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear to the examiner what the applicant means by the phrase "thickness direction" in line 15 of the claim 1 and line 4 of claim 8. What is a thickness direction? Does the applicant mean an "axial direction," in other words in a direction corresponding to the axis of rotation?

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 3682

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1, 3, 8, and 10, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al, USP 5,591,093 in view of Strasburg et al, USP 2,198,135 and further in view of Tresselt, EP 0013129.

Asai discloses a torsional damper pulley comprising:

- A hub (10, see Figure 7) fixed at a revolving shaft (passes through the hub) of an internal combustion engine
- An annular pulley body (30) rectangular in section (when a disc is cut down the center the resulting cross section is rectangular) which is coaxially placed outside the hub (10) in its radial direction, having a pulley groove (312) at an outer circumferential portion
- An elastic solid (40) interposed between the outer circumferential surface of the hub (10) and the inner circumferential surface of the pulley body (30)
- The pulley body comprises an annular metallic frame (C2/L5-10, pulley is made of a thin metal plate) having U-shaped in section (see Figure 7 character 30), which has a concave portion (S2) open in an axial direction and has the pulley groove (312) at an outer circumferential portion

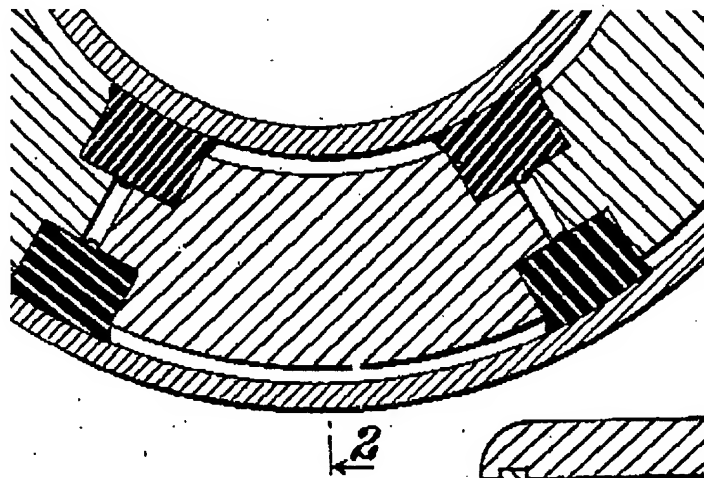
Asai does not disclose a predetermined inertial mass comprising an annular inertia mass element fixed in said concave portion, wherein said inertia mass element is comprised of a laminate of annular plates which is formed of plural arc-shaped ring pieces bonded in a circumferential direction and a tickeness direction thereof and the

plural arc-shaped pieces each comprise connecting means for connecting with adjoining plural arc-shaped ring pieces, the connecting means being a part of the ring piece.

Strasburg and Tresselt teach an annular inertia mass element (10/11 of Strasburg, plates in Figure 3 of Tresselt) fixed in a concave portion (both shown in cavities), wherein said inertia mass element is comprised of a laminate of annular plates (both show plates) which is formed by bonding arc-shaped ring pieces (10/11 of Strasburg) in a circumferential direction (Strasburg Figure 1) and a thickness direction (Tresselt Figure 3) thereof and the plural arc-shaped pieces each comprise connecting means (end tabs 21 and spacers 22 of Strasburg and concave portions 72 of Tresselt) for connecting with adjoining plural arc-shaped ring pieces, the connecting means being a part of the ring pieces for the purpose of providing a device that has simple parts and is more efficient in operation (C1/L2-3 Strasburg) and to insure adequate axial concentricity between the discs (Pg 2/L25-27 Tresselt).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Asai and an annular inertia mass element fixed in a concave portion, wherein said inertia mass element is comprised of a laminate of annular plates which is formed by bonding arc-shaped ring pieces in a circumferential direction and a thickness direction thereof and the plural arc-shaped pieces each comprise connecting means for connecting with adjoining plural arc-shaped ring pieces, the connecting means being a part of the ring pieces, as taught by Strasburg and Tresselt, for the purpose of providing a device that has simple parts and is more efficient in operation and to insure adequate axial concentricity between the discs.

Re clm 3, Strasburg discloses that the connecting means of each ring piece includes a protruding piece (A, see Figure below) formed in one end of the ring piece (B, combination of 10 and 11) and a hole formed in the other end (C) of the ring piece (B), and said ring pieces are bonded in a circumferential direction by close-fitting the protruding piece (A) of one of the ring pieces (B) adjacent in a circumferential direction into the hole of the other one of the adjacent ring pieces.



Taken from Strasburg Figure 1

Re clm 8, Asai in view of Strasburg and Tresselt discloses the annular plate is formed by bonding said ring pieces in a circumferential direction (Strasburg to make rings of Tresselt) and said laminate (stack of rings in Tresselt) is formed by bonding a plurality of annular plates in a thickness direction of said plurality of plates.

Re clm 10, Tresselt discloses the annular plate having an outer diameter to be in pressure-contact with an inner surface of an outer circumferential wall for defining the concave portion (s2) of said pulley body (30), and said inertia mass element is fixed by being press-fitted into said concave portion (Page 6 Line 1-12 of Tresselt "the discs are

Art Unit: 3682

secured together continuously at a radius adjacent the inner border of the working chamber and a radius adjacent the outer border").

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asai in view of Strasburg and Tresselt and further in view of Critton, USP 4,872,369.

Asai in view of Strasburg and Tresselt discloses all of the claimed subject matter as described above.

Asia in view of Strasburg and Tresselt does not disclose that a resin is filled into the concave portion of said pulley body after the inertia mass is inserted

Critton teaches that a resin (silicone C4/L67) is filled into a concave portion (11) after an inertia mass (12) is inserted into the pulley body (14) for the purpose of providing more dampening to the system (C4/65-C5/L9).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Asai in view of Strasburg and Tresselt and provide a resin that is filled into a concave portion after an inertia mass is inserted into the pulley body, as taught by Critton, for the purpose of providing more dampening to the system.

***Allowable Subject Matter***

7. Claims 6, as well as those depending from (clm 7), are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

8. In response to the applicants arguments directed to the object to the IDS it should be noted that:

The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a). In this case the applicant has filed the references in a form of an IDS statement and is required to submit legible copies of each foreign patent.



Art Unit: 3682

9. In response to the applicants arguments that there is no teaching or suggestion in the reference of Strasburg of any particular bonding or permanent connection between the plates (pg 14 paragraph 1 of Remarks), it is noted that the features upon which applicant relies (i.e., "particular bonding" and "permanent connection") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The term "a part of" used in clm 1 does not mean that the connecting means are formed integrally as a homogeneous member with the rings. "A part of" only implies that the pieces are somehow functionally connected as Strasburg shows.

10. In response to the applicants arguments that Tresselt does not teach or suggest making the disc out of ring-shaped pieces (page 14 paragraph 2 of Remarks) the examiner agrees. However, the examiner would like to point out that Tresselt is not being sued to teach ring-shaped pieces, the reference of Strasburg is being used to teach such limitation.

11. In response to applicant's argument that there is no suggestion to combine the references provide by the examiner, the examiner directs the applicant back to the rejection. In the rejection of this Office Action and the previous action the motivation for combining the references of Strasburg and Tresselt with Asai was provided as "...for the purpose of providing a device that has simple parts and is more efficient in operation (C1/L2-3 Strasburg) and to insure adequate axial concentricity between the discs (Pg 2/L25-27 Tresselt)."

Art Unit: 3682

12. The arguments directed to the claims 6 and 7 are moot, see above.

13. The applicant argues that there is not a teaching for a press-fitted connection between the mass and the concave portion (pg 15, 2<sup>nd</sup> full paragraph of Remarks).

It is the examiner position that the terms used in the claim (i.e. pressure-contact) are broad terms and as long as the mass is capable of contacting the inner portion of the concave part there is a pressure-contact, in this case the plates of Tresselt can float within the concave portion and this floating connection will allow for the plates to come in pressure-contact with the concave portion at some point. Also, the term press-fit is a product-by-process limitation and without any disclosure of structure that allows for the press-fit (i.e. the discs are have an outer diameter slightly larger then the outer diameter of the concave portion) the claim limitation is broad and just about all references will read on it. In this case, the plates of Tresselt are pressed into the concave portion during assembly.

14. Applicant's arguments with respect to claim 13 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

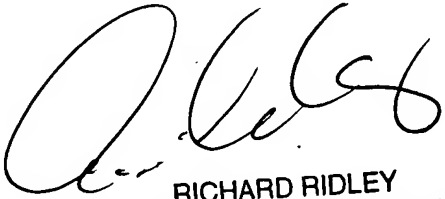
Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP

JP

1.9..2007



RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER